

USSN 10/709,209 filed 04/21/2004 (DP-305691)

Amendment dated: 31-MAR-2006

Response to Office Action of 10/31/2005

AMENDMENTS TO THE DRAWINGS

Please substitute the enclosed drawing sheets 1/4 to 4/4, inclusive, each labeled "Replacement Sheet", for the corresponding sheets presently in the case.

Figure 4 is amended to add reference numeral 10 (low-temperature co-fired ceramic substrate) as well as its associated lead line.

REMARKS

In the Office Action, the Examiner required, under 35 U.S.C. 121, election by the Applicants of a single disclosed invention for prosecution on the merits, selected from groupings identified as Invention I. encompassing claims 1 – 10, drawn to a circuit board assembly, classified in class 174, subclass 260 and Invention II. encompassing claims 11 – 20, drawn to a process of forming a circuit board assembly, classified in class 29, subclass 830+.

Furthermore, the Examiner required that, if Invention I. is elected, then the Applicants must further elect between Species I. (Figure 2) and Species II. (Figure 3) for prosecution on the merits. Claims 1 and 10 are deemed generic.

The Applicants hereby reaffirm the provisional election made by Gary Hartman (Reg. 33,898) on 18 July 2005, with traverse, to prosecute the invention of Invention (Group) I., Specie I , of which claims 1 – 4 and 6 – 10 are readable thereon.

Section 803 of the latest edition of the *Manual of Patent Examining Procedure (MPEP)* sets forth two criteria for the proper requirement for restriction between patentably distinct inventions, requiring (A) the invention must be independent and distinct as claimed; and (B) there must be a serious burden on the Examiner if restriction is required.

All of claims 1 – 20 can and should be searched, and examined together by the Examiner without requiring a serious burden.

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In view of the above election, with traverse, Applicants request that all claims 1 – 20 be considered and examined in this application.

Claims 1 – 10 are objected to due to certain informalities. In the above-described amendments to the claims, the Applicants believe that they have adopted the essence of the correction suggested by the Examiner, and request that the objection be withdrawn.

Claims 1 – 4 and 6 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polinski, Sr. (U.S. 5,386,339).

Independent claim 1 has been amended to recite “*A circuit board assembly comprising: a co-fired substrate comprising at least first and second regions superimposed and bonded to each other, the first region being formed of a plurality of superimposed first ceramic layers, each first ceramic layer consisting essentially of electrically-nonconductive materials, ... a surface-mount IC device mounted to a first surface of the substrate defined by one of the first ceramic layers, wherein said first and second regions are arranged for serial thermal interconnection between said IC device and an opposed heat sink.*”.

Thus amended, claim 1 specifies that thermal energy from the power chip 12 flows serially, first through upper (relatively less thermally conductive) continuous region 32, and then through the lower (relatively more thermally conductive) continuous region 34, and, finally, to an opposed heat sink 20. Polinski neither discloses nor suggests such an arrangement. To the contrary, each of the Polinski embodiments discloses mounting the IC chip to the higher thermally conductive layer or heat sink.

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Independent claim 10 has been similarly amended, and is, thus, distinguishable over Polinski for the same reasons.

Claims 2 – 4 and 6 – 9 depend, directly or indirectly, from above described independent claims 1 or 10, and are also distinguishable over Polinski.

Accordingly, in view of the forgoing amendments, Applicants request that the rejection be withdrawn.

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Conclusion

Applicants believe, in view of the amendments and remarks herein, that all grounds of rejection of the claims have been addressed and overcome, and that all claims are in condition for allowance.

If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the telephone number provided.

The Commissioner is hereby authorized to charge any fees associated with this communication and/or credit any overpayments to Deposit Account No.: 50-0831.

Respectfully submitted,



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